The Most Important Highway in the World

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Across the Ohio and up in the Kentucky hills where I was born, my father used to send a man from the place to "work on the road" 3 or 4 days a year. If he took a team he got credit for 3 days' work instead of one, and that was his road tax. It sufficed until the freezings of winter and the spring rains of another year made the roads impassable again.

I don't suppose the engineering was of a very high order, and I know the drainage system left something to be desired, but it was enough for that day; we made it do. Nearly every Saturday found us on the way into the little town that was our trading center. I had thought, though, that we had out-grown that comfortable way of life until a year or two ago when I was shocked to have the president of a great state farm organization—not Indiana—disclaim the need for a county highway engineer, or any engineering services on the county roads, with the statement that he could fill in a mud hole as well as any man who had been graduated from a state university, and maybe better. No doubt he could, if that was all he was looking for.

Today we pay our road tax in millions and billions of dollars, and we pay it in a fairly painless sort of way every time we drive up to a gasoline pump. Added to our excise taxes and other fees, these pennies mount up until they will run to $4 or $5 billion this year. It is a very respectable sum of money.

That little stretch of road, which earlier made the trip into town and back a half-day project, now is straightened and blacktopped, making the trip to town and return a before-breakfast run. Along with 3,000,000 other miles of highway, it accommodates 67,000,000 automotive vehicles. I could dwell on this nostalgic theme but it is enough to say that all our other ways of life have changed, too. The hard road and the rubber-tired vehicle have brought the most profound social and economic revolution in the American way of life.

I wish I could say that it has been a bloodless revolution; but instead it has been a most sanguine, internecine slaughter, because on our high-

ways we have killed many more people than we have lost in all the battles we have fought to gain and keep our independence and freedom as a nation.

About 20 miles outside of Lima, Peru, the Pan-American Highway skirts the Pacific Ocean on the one hand and a vast mountain of sand on the other as it runs north toward the Ecuadorian border.

On the left a sheer precipice of 300 or 400 ft. drops to the rolling blue of the Pacific Ocean that stretches as far away as the eye can see. On the right are thousands of bags filled with the mountain's own sand that layer upon layer and tier upon tier eschelon back and up, back and up, until they touch the frilly nightcap of the snow-covered mountain.

But the forces of nature being what they are and the frailty of man being what it is, a rent has happened to one of those bags, or they have shifted, and a thin trickle of sand, from a hundred feet or so up, flows down onto the highway.

To take care of this emergency is a frail little Indian, whose ancestors were in Peru when Pizzaro came over to rob that country of its gold. He has a broom, a shovel, and a wheelbarrow, and as that sand piles up he shovels it into the wheelbarrow and trundles it across the road and dumps the sand into the Pacific Ocean. It has always seemed to me an exercise in futility and frustration. With that little broom he can never hope to sweep that mountain away, and with wheelbarrow load after wheeelbarrow load and lifetime after lifetime, he can never hope to fill up the Pacific Ocean.

And yet he serves a useful purpose, because if that pencil-like stream of sand was allowed to continue it would block the right-hand lane of traffic; it would block the left-hand lane of traffic; it would block the whole highway; and under its own power it would flow over into the ocean. And it would block, too, the grand concept of one longitudinal highway connecting the countries of the American hemisphere. You might say the little man with the broom serves mightily by standing still.

PROGRESS IN HIGHWAY SAFETY

Sometimes during the past years I have felt like the little man with the broom. Year after year and decade after decade the fatality figures have been about the same, 38,000, 39,000, at worst 42,000, but never, it seemed to me, was there any substantial improvement. And we have had a million and more people maimed and injured every year.

But we have made progress. We ought to know that the cause is not hopeless, and that there has been and is a grand design, a basic strat-

egy, that is producing results. However loud we may say that the price we have paid for our technological progress as a nation has been too high, no man in his senses believes that we are going back to the 2-horse wagon of my early days, or that we will pay our road tax by the back-bending process of shovelling dirt into mud holes.

What then are these results? How have we made progress while seeming to stand still. The measuring rod is the number of fatalities per 100 million miles of vehicle travel, the measure of exposure to possible accident.

Twenty years ago nearly 16 people were killed for every 100 million miles of travel. And the total was in round figures 40,000 fatalities. The travel figure was less than 100 billion miles. The population increased, the car registration grew, and the number of traveled miles mounted proportionally. The theoretical exposure to accident, one with another, is astronomical. Two cars on the road offer one opportunity for collision accident. But four cars on the road provide six chances of collision with each other, eight cars 28, and so on.

Ten years ago the fatality rate was approximately 12 per 100 million miles, but last year, while the total dropped approximately 1,600 deaths, the fatality rate was 5.9 persons killed per million miles.

This is progress, but not enough. It is nothing to be complacent about. Complacency and inertia are indeed the greatest hazards on the road today. And the cost is 40,000 fatalities, 1,400,000 injured, and an economic loss that is estimated at $5 billion annually in time, doctor's bills, and damaged property, about the figure that will be spent on road improvement this year.

And there is another loss that has had too little attention. Our automotive liability insurance bill is more than $4 billion paid out in premiums each year, to protect you, shall we say, from my carelessness, and all of us from each other. I am confounded by this figure, which I have from the insurance magazine, the *Spectator,* and equally by the concommitant to it that of the four billion and more dollars collected in premiums each year, only a little more than half, 52 per cent, is paid back in claims, leaving two billions of dollars for administration, operation, and reserves. And the companies are losing money. Liability rates are up 10 to 20 per cent generally throughout the country to protect the companies against further losses.

To meet these and other problems in our transportation economy, we need distance vision. Our hindsight is a perfect 20-20, but only when we meet together to plan for the future, as we do here today, is the scene blurred and obscured.

THE EXPANDED FEDERAL AID PROGRAM

One of the great hopes for tomorrow is the huge modernization program being undertaken jointly by the federal government and the states in building to superstandards the 41,000 miles of interstate, interregional highways connecting the principal centers of population of our nation. This is the 1956 road program that was planned to cost $27 billion within a 13-year span. Spiraling costs have increased this estimate to $40 to $41 billion.

This is the greatest building program the world has ever known, and I have great hopes for it. But a word of caution and moderation must be said before we become enamoured of our own enterprise and our own cleverness. In the first place, the cost already equals and is likely to exceed $1 million per mile. In the second place, improved to these fine standards, these interregional roads will carry only about one-fifth of the estimated traffic in 15 years. And there is the danger that the engineers, and most of them I know and claim as friends, may become so preoccupied with the vastness of the task that they will give the little roads, the so-called farm to market, secondary highways, less attention than they deserve. It would be the human thing to do. The program should have our unstinting support, but without the extravagant claims made in its behalf, and without sacrifice to the demands of other sections of the highway economy.

An Indiana statesman has said recently: "We have been somewhat disturbed in recent weeks because of indications that an attempt will be made to freeze funds for federal primary, farm-to-market and urban extensions at $900 million per year. The expanded federal highway program as it was originally contemplated was with the understanding that improvements would be stepped up on the federal-aid, primary, secondary and urban extensions as well as the interstate system. In these days of increased construction costs due to inflation and other factors, we feel that it would be unsound to place an indefinite limit on funds appropriated to federal highways other than the interstate system. On the contrary, we must support the principle of the bill now pending before Congress which will increase regular federal aid authorizations $25 millions a year for the fiscal years ending June 30, 1960, and June 30, 1961. When the new program was developed we understood that it was planned for these appropriations to be stepped up $25 million a year until they reached a total of one billion dollars which when matched by the states would give a total of two billion annually for the A-B-C roads."

No man has a better right to voice anxiety than that Indiana farmer, Herschel Newsome, master of the National Grange, universally respected by the Congress and all of Washington, whom I quoted above.

What are the remedies that may be applied to highway programming and to a campaign for a reduction of accidents? I have made certain general suggestions, but let me labor one point that I hope you may remember, and that comes with especial appropriateness in this good climate and from this platform on the campus of Purdue University. To do that let's go back for a moment a hundred years.

UNIVERSITY CONTRIBUTIONS TO SAFETY AND TRANSPORTATION

The time was 1861 and the president of the United States, Abraham Lincoln, was concerned with a war, and, what is amazing in the circumstances, with education for the masses of the people of the United States. The great cultural centers of the nation were in the East, at Harvard, Yale, Princeton, the schools known now in football vernacular as the Ivy League.

Lincoln signed the land-grant college act in 1861, creating cultural centers in each state in the Union, of which Purdue today is a shining example. These colleges also were charged with improving the conditions of agriculture and with the responsibility for teaching the mechanic arts.

At that time it took seven people on the land to feed one person in town. Today, because of the extension services of the universities and the great technological development and research of these institutions, that ratio has more than been reversed; one person on the land feeds 17 people in town, with enough food and fiber left over to give the Secretary of Agriculture a headache in the disposal of surpluses.

I will not say that this development has reached its climax; there are, of course, great strides still to take. But what, would you say, is the next major problem facing these enlightened institutions? I would say it is the efficient distribution of the largess they have created. Perhaps you read, as I did about 3 weeks ago, a statement by the Secretary of Agriculture that the farmer's income from agriculture was down for '57 over '56 about 3 per cent. And if you turned another page in the same paper you found a statement from the Secretary of Commerce that food prices to the consumer had increased 2 per cent over that of the preceding month. That leaves a discrepancy somewhere.

If you agree with me that the next major task of the principal educational institutions of Indiana and the other states is distribution, then

Purdue is right in the middle of the highway and safety problems of Indiana. And so are her sister institutions in other states.

I must not say that Purdue has done nothing about this problem. Indeed, it has done a great deal. I merely say it must do more in the planned and orderly way that is so characteristic of all its activities. If Purdue is a typical land-grant college, and I am ready to say that it raises the average rather than that it lowers it, then 40 to 50 per cent of all Indiana highway engineers come from its classrooms. It has shown enterprise equalled by no other school to my knowledge in giving degrees in traffic engineering. It has a fine program of safety in the health and welfare department and it has an efficient and able institute of safety that is constantly alert to the problems of traffic in Indiana towns and cities and within the state generally.

I hope the time may come presently when the state will support a center for safety, or even better a center for transportation. But Purdue cannot have what the state will not give, and I hope that an understanding of the vast service that the institution may render will become widespread between now and the next few months or years.

Generally, but not here, the land-grant schools have come tardily into the transportation picture. But we have some notable examples of enterprise. As I have said, Purdue is one. So is California with a limited program. So is Texas A and M with a research set-up, and Michigan State with an embracing program that cuts across all the disciplines of the institution. I hope to see the time when the public will support and the institutions will welcome centers for transportation as areas where they can make a contribution of service to the people of the state as great as any they have given heretofore.

Let me cite briefly another area where an educational institution can give point and direction to those in charge of the vast road-building program with its dislocations, its high promise, and its spending of public money. I am thinking of a study made not too long ago by the University of Maryland, where it was found for instance, that 76 per cent of the total road mileage of the counties studied were used by rural mail carriers, and that another 70 per cent in another county was used for school bus operations. I have missed lately, the enlightening studies that used to come from Iowa on the use of local roads. I am simply voicing anxiety that our findings of fact for guidance in action are not as extensive as they were. I wonder if we know all that needs to be known.

Perhaps, voicing this concern, I may quote something I wrote quite a while ago:

"The highest highway in the world is in the Peruvian Andes, the longest is the old silk route in Central Asia, the most heavily traveled between New York and Philadelphia, but the most important highway in the world is the road past your door."